

Summary of Changes (v19.08)

1. Comprehensive updates necessary for TG 13281 Attachment C Technical Guide (last update was done in May 2003) and now incorporated into TG 13281 (was part of TG13280).

**Removal and Disposal of Asbestos Containing Materials  
(ACM) (Attachment C)  
TECHICAL GUIDE**

**TG 13281**

**REQUIREMENTS FOR ROOF REMOVAL WORK CONTAINED IN THE OSHA STANDARD FOR ASBESTOS CONSTRUCTION (29 CFR 1926)**

The following is a summary of 1926.1101 Asbestos requirements used in the OSHA Standard concerning roofing work.

1. Definitions: Class II asbestos work means activity involving the removal of ACM, which includes roofing and construction mastics.
2. Permissible exposure limits (PELs):
  - A. 8 hour time weighted average (TWA), .1 f/cc.
  - B. Excursion Limit, 30 min., 1.0 f/cc.
3. Regulated Areas: All Class II work must be conducted within a regulated area, demarcated in any manner which limits the number of persons within the area and protects persons outside the area.
4. Exposure Assessment and Monitoring:
  - A. Initial Exposure Assessment: Required to be performed by a "competent person" prior to start of work, unless a "negative exposure assessment" has been performed, to ascertain expected exposure during the work.
  - B. Negative Exposure Assessment: the employer may demonstrate using objective data that the work cannot release airborne fibers in concentrations exceeding the PELs.
  - C. Periodic Monitoring: For Class II work, daily monitoring must be performed within the regulated area unless a "negative exposure assessment" has been made. Exception: If employees are equipped with supplied-air respirators, daily monitoring may be deleted.
5. Methods of Compliance:
  - A. Prohibitions: The following work practices shall not be used.
    - 1) High-speed abrasive disc saws that are not equipped with point of cut ventilator or enclosures with HEPA filtered exhaust air.
    - 2) Compressed air used to remove ACM unless used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air.
    - 3) Dry sweeping, shoveling or other dry clean-up of dust and debris containing asbestos.
    - 4) Employee rotation as a means of reducing employee exposure to asbestos.
6. Work practices and engineering controls for Class II work: All Class II work must be supervised by a "competent person."
7. Additional Controls for Class II Work:
  - A. For removing roofing material which contain ACM, following work practices apply.
    - 1) Remove roofing material in an intact state to the extent feasible.
    - 2) Wet Methods must be used where feasible.

- 3) Cutting Machines shall be continuously misted unless a Competent Person determines that misting substantially decreases worker safety.
  - 4) All loose dust left by a sawing operation must be HEPA vacuumed immediately.
  - 5) Unwrapped or unbagged roofing material must be immediately lowered to the ground.
  - 6) Upon being lowered, unwrapped material must be transferred to a closed receptacle in a manner so as to preclude the dispersion of dust.
  - 7) Roof level air intakes must be isolated or shut down to prevent entry of any potential asbestos containing dust or debris from entering occupied building spaces.
- B. Asbestos-Cement Shingles:
- 1) Cutting, abrading or breaking shingles is prohibited unless the employer can demonstrate that methods less likely to result in asbestos fiber release cannot be used.
  - 2) Spray each panel with amended water (water with surfactant added) prior to removal.
  - 3) Unbagged shingles shall be immediately lowered to the ground via dust tight chutes, crane or hoist. Or bag and lower to ground no later than end of work shift.
  - 4) Nails shall be cut with flat, sharp instruments.
8. Respiratory Protection: Required in the following circumstances:
- A. ACM is not removed in an intact state.
  - B. Removal is not done using wet methods.
  - C. Employer does not produce a "negative exposure assessment".
  - D. Employees are exposed above the PELs.
  - E. In emergencies.
9. Protective Clothing: Required for any employee exposed to airborne concentrations which exceed the PELs or in cases where a "negative exposure assessment" has not been produced. The transport and cleaning of contaminated clothing is also regulated.
10. Hygiene Facilities: An equipment room adjacent to the regulated area is required for the decontamination of employees and their equipment if a PEL is exceeded or there is no "negative exposure assessment".
11. Communication of Hazards:
- A. Signs: Warning signs that demarcate the regulated area shall be provided.
  - B. Labels: All waste containers containing asbestos must be labeled.
12. Employee Information and Training: All employees to handle ACM shall be trained in a course of at least 8 hours.
13. Housekeeping: Where vacuum methods are used, HEPA filtered vacuuming equipment must be used.
14. Medical Surveillance: Required for all persons who are engaged in Class II work for a total of 30 or more days per year, or exposed above the PELs, or required to wear negative pressure respirators.
15. Recordkeeping: Required for objective data relied on for exposure assessments and monitoring, exposure measurements, medical surveillance, training records, and required notifications.

- 16. Competent Person:** A person designated by the employer as a competent person who has the qualifications and authorities for ensuring worker safety and health. Training of this person shall include all aspects of asbestos removal and handling; such training shall be obtained in a comprehensive course for supervisors.

END OF SECTION 13280 - ATTACHMENT C